HUNTER×HUNTER
新連載
The HUNT for ENERGY
2
presented by
Boichi
RAW - 10TH MYSTERY
TL - CASTELLAN
CLEAN - UNOGRAIL
TS - ARYA
REDRAW - UNOGRAIL
PR - KORO
WWW.JAPANZAI.COM
WWW.SUNKENROCK.COM

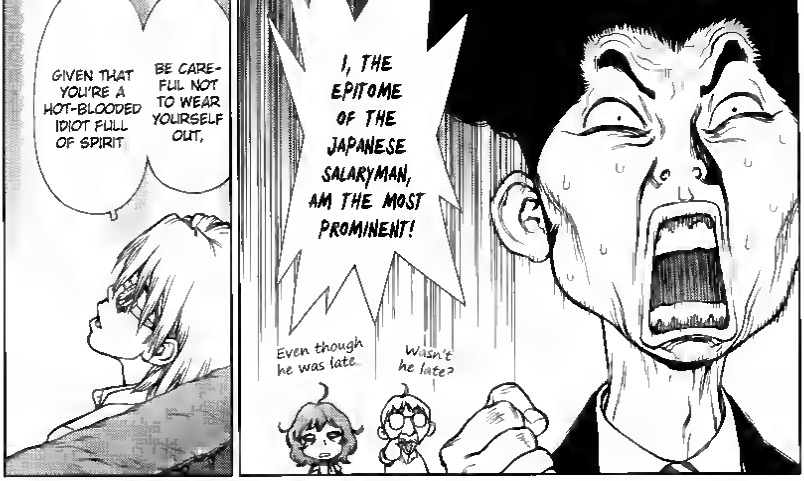
Nobuki Sakuragi's apartment
City of Kawasaki
SNAP
CRACK
The HUNT for ENERGY
HUNT.2
ENERGY, HUH ..?
ECO..
Nutrition for heavy mental activity
I'M EXHAUSTED!
ALRIGHT!
IT FEELS LIKE I'M REALLY USING MY HEAD!

I OVER-SLEPT!
TAXIIII!
I'M LATE FOR WORK
TO TOYOSU, PLEASE AND STEP ON IT!
YES SIR.
TOSS
HUH?
ブウン
THERE'VE BEEN A LOT OF REAL IDIOTS LATELY.
THEY DO SEEM TO RUN AMOK AFTER NATURAL DISASTERS, DON'T THEY?
zing
HEY, OLD MAN, I'M GETTING OUT. I'LL JUST WALK.
YOU SAID YOU WERE LATE!!
OH, I ALMOST FORGOT... WHAT DO YOU THINK MAKES FOR GOOD ECO-ENERGY?
EHH?

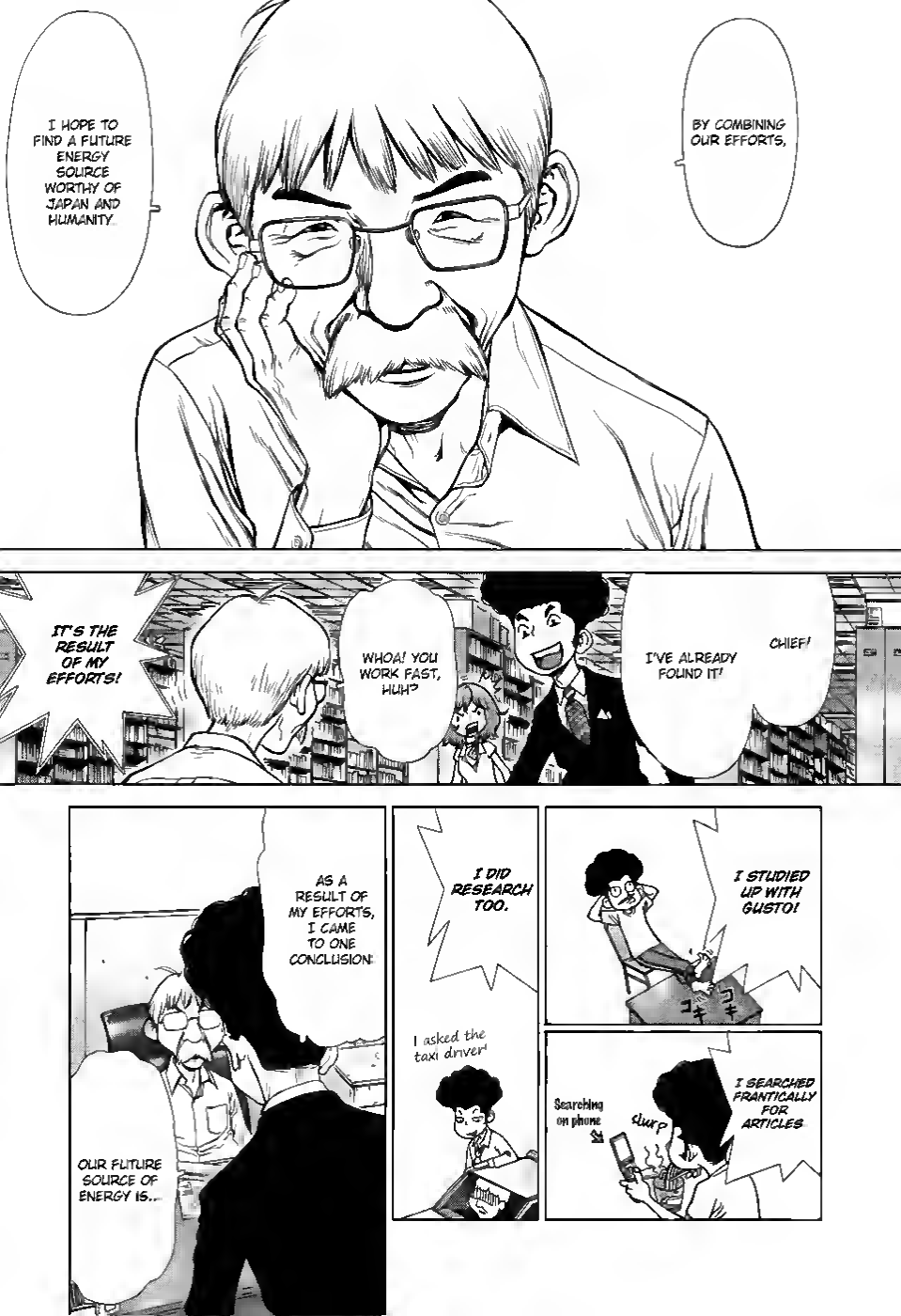
HUNT.2
The HUNT for ENERGY

SORRY I'M LATE!
ON YOUR FIRST DAY? UNBELIEV-ABLE!
JEC
(Japanese Energy Corporation)
Next Gen Energy Division
(Old Company Records Room)
YOU'RE LATE ON YOUR FIRST DAY, BROCCOLI...?!

I'M FIRED UP!
OF COURSE!
EVEN THOUGH YOU'RE LATE, YOU SURE HAVE SPIRIT, SAKURAGI-SAN
Though I was definitely late
THE BEAUTIFUL HIROSUE-SAN!
THE BOSS, TERADA HIROSHI!
AND ONE IDIOT WHO SEES WEIRD STUFF.
I'M THE PILLAR OF THIS ERA!
ME, NOBUKI KATSURAGI!
REPORTING ONLY TO THE PRESIDENT
ABOUT SECRET OPERATIONAL DETAILS!
THE GATHERED SPECIALISTS ARE—
4 PEOPLE!!
SINCE THE DISASTER, OUR COMPANY HAS BEEN MOVING AWAY FROM THE PETROLEUM ENERGY INDUSTRY.
THIS DEPARTMENT WAS CREATED IN ORDER TO FIND THE NEXT GENERATION OF ENERGY FOR JAPAN!


GIVEN THAT YOU'RE A HOT-BLOODED IDIOT FULL OF SPIRIT
BE CAREFUL NOT TO WEAR YOURSELF OUT.
I, THE EPITOME OF THE JAPANESE SALARYMAN, AM THE MOST PROMINENT!
Even though he was late...
Wasn't he late?

WELL...
EVERYONE SHOULD WORK IN THEIR OWN WAY.
IT'S PRETTY SCARY TO HEAR ABOUT HER AMBITION...
PLEASE, BOTH OF YOU, BE DILIGENT IN YOUR WORK.
I, LIKE A TRUE TOUDAI ALUMNUS, WILL USE THIS DEPARTMENT AS A STEPPING STONE TO GOBBLING UP THIS COMPANY.♡
YOU'VE GOT THE GUTS TO SPOUT QUITTIN' TALK TO ME?
I HAVE MY OWN WAY OF DOING THINGS
NO, I'M DOING MY JOB.


I HOPE TO FIND A FUTURE ENERGY SOURCE WORTHY OF JAPAN AND HUMANITY.
BY COMBINING OUR EFFORTS,
IT'S THE RESULT OF MY EFFORTS!
WHOA! YOU WORK FAST, HUH?
I'VE ALREADY FOUND IT!
CHIEF!
AS A RESULT OF MY EFFORTS, I CAME TO ONE CONCLUSION:
OUR FUTURE SOURCE OF ENERGY IS...
I DID RESEARCH TOO.
I asked the taxi driver!
I STUDIED UP WITH GUSTO!
コキ
Searching on phone
slurp
I SEARCHED FRANTICALLY FOR ARTICLES

SOLAR POWER!
Nothin else will do
IT DOESN'T MATTER! THAT IS THE RIGHT ANSWER!
FOR ALL THE EFFORT YOU SAY YOU PUT IN, THERE DON'T SEEM TO BE ANY RESULTS AT ALL.
WHAT A "NORMAL" CONCLUSION!
DID YOU REALLY PUT ANY EFFORT INTO IT?

WHAT?
IS THAT RIGHT?
TH-THAT IS... I'M TALKING ABOUT USING SOLAR ENERGY ON A GRAND SCALE, USING FALLOW AND UNUSED LAND THROUGHOUT JAPAN.
ON A GRAND SCALE
THROUGHOUT JAPAN?
FALLOW AND UNUSED LAND...?
DO YOU REALLY THINK...
THAT SOLAR ENERGY COULD BECOME JAPAN'S FUTURE ENERGY SOURCE?

IS THAT REALLY GONNA WORK?
GA...
YOU'RE JUST CRITICIZING IT BECAUSE IT'S MY IDEA, RIGHT?
I'M SORRY.
I APOLOGIZE FOR THE MISUNDERSTANDING.
IT'S NOT THAT I'M TRYING TO DISREGARD YOUR VIEW, BROCCOLI.
I'M ASKING YOU A SERIOUS QUESTION
IT'S DANGEROUS
TO JUST DRAW A QUICK CONCLUSION
ON WHETHER OR NOT USING ENERGY FROM THE SUN IS REALISTIC.
LET'S LOOK AT IT FROM THE BEGINNING.
IT'S BEST THAT WE LOOK AT IT FROM ALL ANGLES.
IT'S A PROBLEM THAT AFFECTS EVERYONE'S FUTURE.

LET'S LOOK AT EVERYTHING WE CAN DO WITH IT.
THAT'S OUR JOB.
HEH...
OKAY. THAT'S GOOD.
LET'S HAVE A BRIEFING BEFORE DIVING IN.
YES SIR.
YES SIR.
YOU'LL CONDUCT THE BRIEFING, NARUSHIMA-KUN.

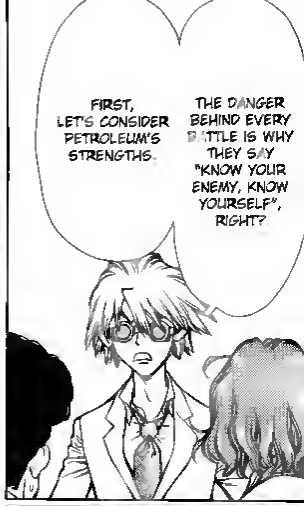
GL: Group Leader

IT'S FINE, YOU CAN DISCUSS WHATEVER YOU WANT...
.....
I HAVEN'T PREPARED ANYTHING!
EH? WHY?? AREN'T YOU THE GL, CHIEF?!
HEHEH... DON'T WORRY, IT'S FINE
WE'RE A NEW DEPARTMENT, AFTER ALL
IT'S FINE~
Don't get so caught up in standard procedure

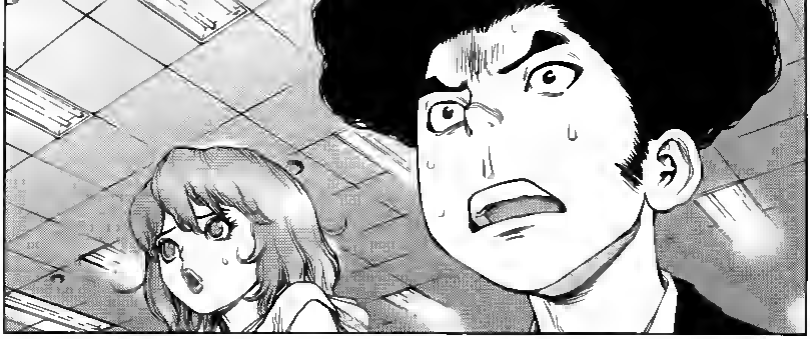
OKAY THEN.
WELL...
Mmmm... Nnnn...
scratch scratch
...

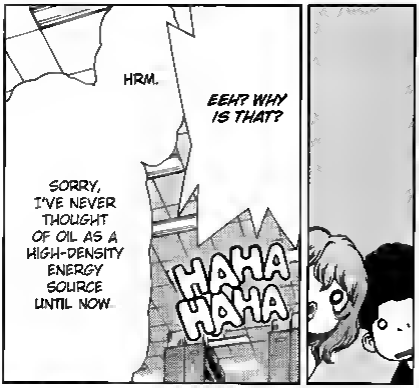
LET'S BEGIN THE DISCUSSION.
ISN'T IT WONDERFUL
HOW MUCH ENERGY WE GET FROM PETROLEUM?
WHAT ARE YOU TALKING ABOUT? WE'RE SUPPOSED TO BE DISCUSSING FORMS OF ENERGY THAT ARE ALTERNATIVES TO OIL!
THAT'S RIGHT! OIL'S OUR "ENEMY"! DON'T YOU GET IT?
TRUE
IT'S THE "ENEMY", HUH?

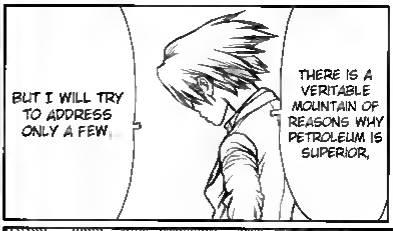
TREMBLE IN FEAR
AT THE OVERWHELMING AWESOMENESS OF PETROLEUM!


FIRST, LET'S CONSIDER PETROLEUM'S STRENGTHS.
THE DANGER BEHIND EVERY BATTLE IS WHY THEY SAY "KNOW YOUR ENEMY, KNOW YOURSELF", RIGHT?

IF YOU KNOW THE CHARACTERISTICS OF PETROLEUM,
YOU'LL REALIZE
JUST HOW DIFFICULT IT IS TO BEAT.



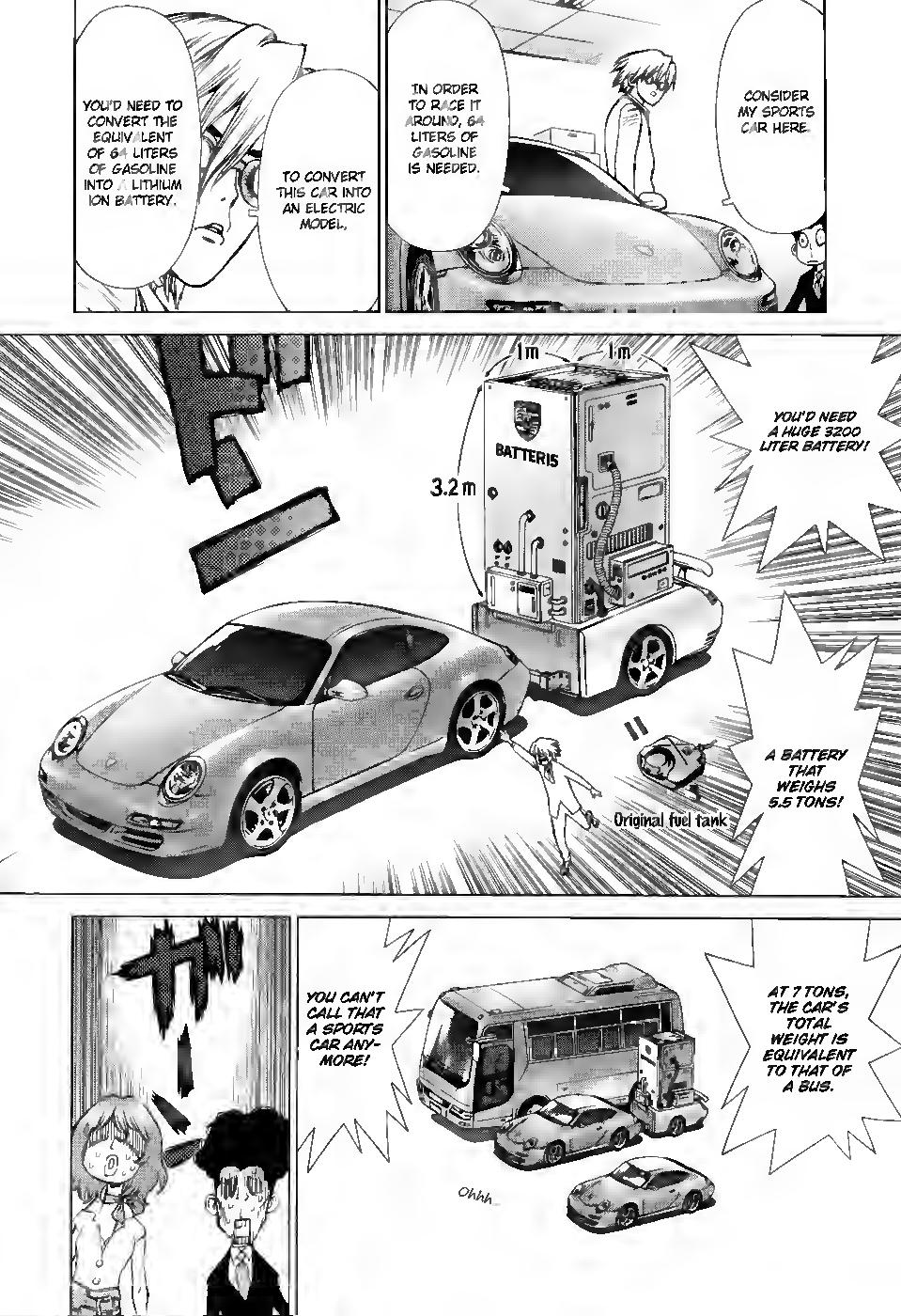

HRM.
EEH? WHY IS THAT?
SORRY, I'VE NEVER THOUGHT OF OIL AS A HIGH-DENSITY ENERGY SOURCE UNTIL NOW.
HAHA HAHA


THERE IS A VERITABLE MOUNTAIN OF REASONS WHY PETROLEUM IS SUPERIOR,
BUT I WILL TRY TO ADDRESS ONLY A FEW.

ONE ADVANTAGE OF PETROLEUM IS THAT,
IT IS A SOURCE OF "HIGH-DENSITY ENERGY"!

GASOLINE 20,000,000 LITERS
URANIUM 200 ML
PETROLEUM HAS OFTEN BEEN COMPARED TO OTHER SOURCES OF ENERGY,
SUCH AS URANIUM, PLUTONIUM AND SUCH, BUT
THERE'S JUST NO COMPARISON.

IN ORDER TO USE ELECTRICITY LIKE YOU USE PETROLEUM, YOU HAVE TO PUT IT IN A BATTERY!
You bastard!
ALL ECO-ENERGY IS WHAT WE WOULD CALL A "SECONDARY ENERGY", AND IT MUST OF COURSE BE CONVERTED INTO ELECTRICITY.
?
WE'RE COMPARING IT WITH "ECO-ENERGY".
IT CAN'T COMPARE TO NUCLEAR FUEL.
PETROLEUM HAS AN ENERGY DENSITY 50 TIMES GREATER THAN THE FINEST LITHIUM ION BATTERY.
LITHIUM BATTERY 50 LITERS
PETROLEUM 1 LITER
50 TIMES!?
S...


CONSIDER MY SPORTS CAR HERE.
IN ORDER TO RACE IT AROUND, 64 LITERS OF GASOLINE IS NEEDED.
TO CONVERT THIS CAR INTO AN ELECTRIC MODEL,
YOU'D NEED TO CONVERT THE EQUIVALENT OF 64 LITERS OF GASOLINE INTO A LITHIUM ION BATTERY.
1m
1m
3.2m
BATTERIS
YOU'D NEED A HUGE 3200 LITER BATTERY!
=
Original fuel tank
A BATTERY THAT WEIGHS 5.5 TONS!
YOU CAN'T CALL THAT A SPORTS CAR ANY-MORE!
Ohhh...
AT 7 TONS, THE CAR'S TOTAL WEIGHT IS EQUIVALENT TO THAT OF A BUS.

BROCCOLI! YOU SAID SOLAR POWER WAS GOOD,
BUT IN ORDER TO GENERATE THE EQUIVALENT OF 64 LITERS OF GASOLINE USING SOLAR CELLS,
DO YOU KNOW WHAT YOU'D HAVE TO DO?
YOU'D HAVE TO GENERATE ELECTRICITY USING THIS MANY SOLAR CELLS FOR A WHOLE DAY!
1040㎡

IT'S SUCH AN EFFICIENT SOURCE OF ENERGY.
BUT WITH PETROLEUM, THIS IS ALL YOU NEED.
64ℓ

IS... IS THAT TRUE!?
PETROLEUM REALLY IS GREAT!
I'VE HARDLY BEGUN TO TOUCH ON
DON'T BE AMAZED JUST YET!
THE GREATNESS OF PETRO-LEUM!
THE SECOND CHARACTER-ISTIC OF PETROLEUM!
ITS UNPARALLELED EFFICIENCY OF PRODUCTION!

WHEN DISCUSSING THE GENERATION OF ENERGY,
THERE'S A UNIT OF MEASUREMENT CALLED "EROEI"
IT'S A NUMBER THAT COMPARES THE ENERGY OBTAINED TO THE ENERGY EXPENDED
EROEI
ENERGY RETURN ON ENERGY INVESTED
ALL OF THE WORLD'S ENERGY IS OBTAINED BY EXPENDING ENERGY
HOW DOES ECO-ENERGY COMPARE?
WHEN CREATING ENERGY,
THERE ARE ALWAYS COSTS INVOLVED
CARBON DIOXIDE EMISSIONS ARE RESPONSIBLE FOR THE DESTRUCTION OF THE ENVIRONMENT
THIS IS A UNIVERSAL LAW THAT CAN'T BE BYPASSED
IN ORDER FOR US TO FIND ECO-ENERGY,
THAT IS A TRUTH THAT WE MUST
KEEP IN MIND.
IT'S AN ESPECIALLY IMPORTANT NUMBER WHEN COMPARING THE ENERGY OBTAINED WITH THE ENERGY EXPENDED
EROEI
2
IF YOU SPEND 1 UNIT OF ENERGY TO GET 2 UNITS OF ENERGY, THE EROEI IS 2
EROEI
10
IF IT'S 1 UNIT FOR 10 UNITS, THE EROEI IS 10!

BUT IF WE THEN TURN TO PETRO-LEUM... IT'S...
30
EROEI 30
SO OVER-WHELM-ING THAT IT'S BEYOND COMPARI-SON!!
CURRENTLY, WIND POWER HAS AN EROEI OF 8!
EROEI 8
SOLAR POWER HAS AN EROEI OF 5!
EROEI 5
THE HIGHER THE NUMBER, THE GREATER THE VALUE OF THE ENERGY!
IT'S ECO-NOMICAL ENERGY!
SO? HOW DO THEY COMPARE?
THE DIFFERENCE IN EFFICIENCY
IS MIND-BOGGLING...

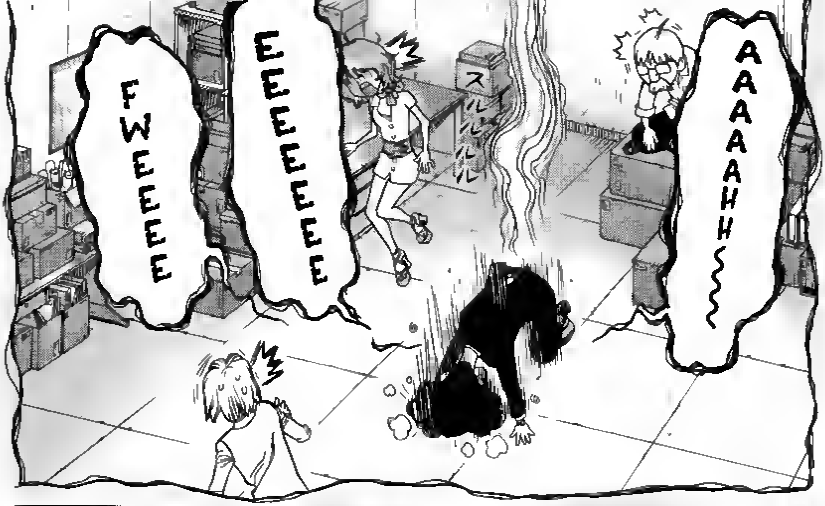
AS A LIQUID, IT'S EASY TO TRANSPORT!
AS A LIQUID, IT'S ALSO EASY TO STORE IN CONTAINERS!
ITS EASE OF USE IS OUTSTAND-ING!
AS A LIQUID, THERE'S COMPLETE FREEDOM OF USE!
THE THIRD CHARACTERISTIC OF PETROLEUM!
IT'S A LIQUID!
WAIT!
ON TOP OF THAT, IT'S CHEAP
WOW ..
IT'S POINTLESS, NO MATTER HOW MANY ADVANTAGES PETROLEUM HAS!

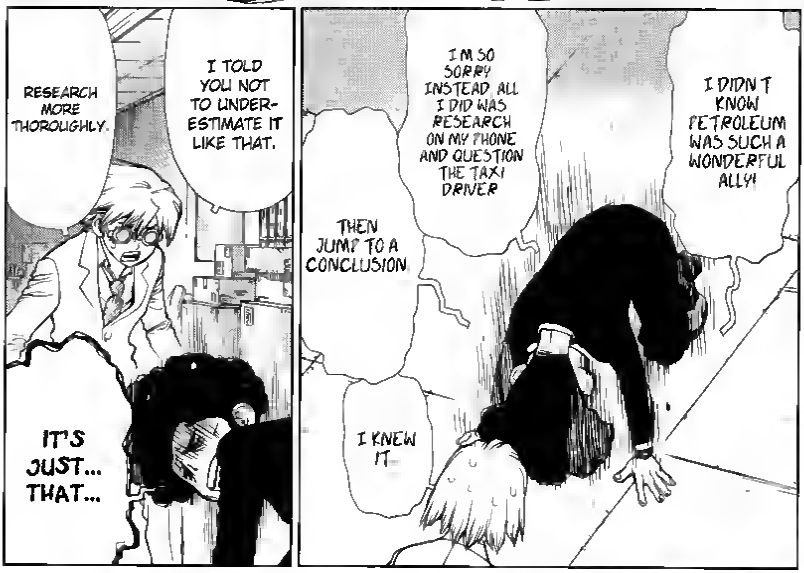
BECAUSE THE EARTH...
HAS A LIMITED SUPPLY OF PETROLEUM!
RIGHT... AS THINGS STAND, WE ONLY HAVE 46 YEARS WORTH OF PETROLEUM LEFT..
Good point
NO MATTER HOW USEFUL IT IS, THERE'S A LIMIT TO THE AMOUNT THAT CAN BE USED!
HEHEHEH
WHAT...?
LISTEN UP..
YOU DON'T KNOW ANYTHING, DO YOU...?

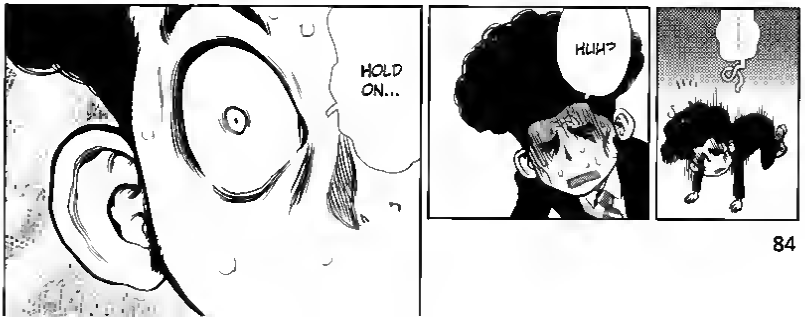
THERE ARE HUNDREDS OF YEAR'S WORTH OF OIL LEFT ON THE EARTH.
WHAT...
SO WHEN THEY SAY THERE ARE 46 YEAR'S WORTH, IT'S A LIE?!
NO...
IT ISN'T A LIE, IT'S THE TRUTH.
WHAT THE...?
WHAT...
WHAT ARE YOU TRYING TO SAY?!

IT'S A COMPLICATED ISSUE, BUT I'LL GIVE A ROUGH EXPLANATION.
WARNING
THE FIGURE OF 46 YEARS WAS CALCULATED IN THIS FASHION.
The reserves that can be extracted, as verified during that year
The amount extracted that year
= 46.2 (2010)
R/P RATIO
THE PROBLEM IS THE "CAN BE EXTRACTED" PART...
FOR EXAMPLE, USING EXISTING METHODS, WE CAN'T EXTRACT MORE THAN 30% OF THE OIL IN OIL FIELDS.
THE END
THE REST IS LEFT AS-IS.
FURTHER-MORE, THERE'S A LARGE AMOUNT OF OIL LEFT ON EARTH,
OIL SHALE
TAR SAND
MUCH OF WHICH EXISTS IN STATES OTHER THAN LIQUID.
THERE ARE MANY TIMES WHEN THE LEFTOVER OIL OUTWEIGHS THE "EXTRACTABLE RESERVES"...!
IF WE COMBINE ALL OF THE OIL ON EARTH..
LEAVING OUT THE "COST", "EROEI" AND DECI-SION OF "WHETHER OR NOT TO EXTRACT",
IT ISN'T ALL THAT DIFFICULT FOR RESERVES TO LAST AS LONG AS 500 YEARS.

THIS WONDERFUL SOURCE OF ENERGY!
UNDERSTAND? WE MUST NOT FIGHT


AAAAAHHHH
EEEEEEEE
FWEEEE


I DIDN'T KNOW PETROLEUM WAS SUCH A WONDERFUL ALLY!
I'M SO SORRY INSTEAD ALL I DID WAS RESEARCH ON MY PHONE AND QUESTION THE TAXI DRIVER
THEN JUMP TO A CONCLUSION
I KNEW IT
I TOLD YOU NOT TO UNDER-ESTIMATE IT LIKE THAT.
RESEARCH MORE THOROUGHLY.
IT'S JUST... THAT...


HOLD ON...
HUH?

IS THAT BAD?!
YOU DON'T KNOW THE REASON?
Make up your mind...
WELL ...
YOU WANNA KNOW WHY WE SHOULDN'T CONTINUE USING THE REMAINING PETROLEUM...?
WHY DO WE NEED TO RESEARCH NEW ENERGY SOURCES?!
IF IT'S THAT USEFUL, AND WE HAVE SO MUCH IN RESERVE,
ISN'T IT FINE IF WE JUST CONTINUE TO USE OIL?

IT'S TO STOP THE WORLD FROM BECOMING A DEEPER SHADE OF RED...

HIE1
The HUNT for ENERGY